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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology and Plant Quarantine
Washington, D. C.

B. E. P. Q. 499, Supplement No. 2

Sec. 301.48a ADMINISTRATIVE INSTRUCTIONS TO INSPECTORS
ON THE TREATMENT OF NURSERY PRODUCTS, FRUITS,
VEGETABLES, AND SOIL, FOR THE JAPANESE BEETLE

Methyl bromide treatment schedule for
fruits and vegetables modified

(Approved June 1, 1940; effective June 4, 1940)

Results of further experiments in methyl bromide fumigation of produce for compliance with certification requirements of Quarantine No. 48 indicate that the dosage may be reduced from 5 pounds to 4 per refrigerator car at a temperature of 80° F. and retain effectiveness of the treatment against adult Japanese beetles. The modified treatment will, it is believed, reduce the cost of fumigation as well as the possibility of injury to certain fruits and vegetables. Circular B. E. P. Q. 499, issued June 9, 1939, is accordingly hereby modified by changing subsection (q) on page 19 of the mimeographed circular to provide for alternative treatments as follows:

(q) METHYL BROMIDE FUMIGATION

(1) Refrigerator cars

Equipment.--Refrigerator cars must have sound, well-fitting doors and hatches, and be in condition satisfactory to the inspector. Standard cloth screens for covering the hatches and a temporary cloth screen for covering one door during ventilation are essential. An electric blower of not less than 750 CFM capacity against $\frac{1}{4}$ -inch water pressure, equipped with devices for lowering into the bunker and securing, so that the blower outlet butts against the bunker screen unimpeded either by studs or burglar bar.

Temperature and dosage.--The temperature in the car during the treatment must be at least:

(i) 80° F. with a dosage of 1.6 pounds for each 1,000 cubic feet, or 4 pounds per refrigerator car; or

(ii) 70° F. with a dosage of 2 pounds for each 1,000 cubic feet, or 5 pounds per refrigerator car.

Period of treatment.--Two hours from the end of the fumigant release period.

Application.--The doors must be closed tightly and the ice drips properly plugged. The methyl bromide may be either weighed or measured and released through a copper or brass applicator tube of $\frac{1}{4}$ -inch bore. This tube must be fitted with a disc-type spray nozzle and must be bent in a "U" shape at the end, so that the spray nozzle is directed upward toward the center of the bunker and not less than 1 foot below the ceiling during the release of the fumigant. The blower must be in continuous operation during the release of the fumigant, and for 5 minutes thereafter. At the end of this period the blower may be removed and transferred to the next car. The fumigant must be released in a split dosage. When a 5-pound dosage is applied, 3 pounds must be released in the bunker through the hatch across from the blower, and 2 pounds in the bunker at the opposite end of the car and in line with the blower. When a 4-pound dosage is applied, 2 pounds must be released in the blower end, and 2 pounds at the opposite end of the car as described above.

Modification of this method of application may be made upon authorization of an inspector.

Ventilation.--At the end of the exposure period, all hatches must be immediately propped open and screened, and the drip plugs removed. One door must be opened and screened for a period of 20 minutes, following which it should be closed and sealed. If the car is to be moved within half an hour, the opening of the door may be omitted.

Commodities treated.--The treatment is approved for the following fruits and vegetables: White potatoes, sweetpotatoes, onions, tomatoes, snap beans, lima beans, sweet corn, cabbage, carrots, beets, apples, and peaches.

(2) Fumigation house, room, and box

The commodities listed above may be fumigated in approved fumigation chambers. The same requirements as to dosage, circulation period, exposure, temperature, and screening of doors listed under refrigerator car fumigation apply. The chamber must be ventilated with the ventilating equipment in continuous operation for half an hour. All ventilator intakes must be protected with 8-mesh wire screen. The ventilating fan must run during both the placing and removal of the load. In addition, the requirements for screened loading facilities and the subsequent certification of loads must be met. (Issued under Sec. 301.48) [B. E. P. Q. 499, Supplement No. 2]

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